

REMARKS

This responds to the Office Action mailed on December 21, 2004.

Claims 1-28 are now pending in this application.

Informal Objections

The Office Action mailed April 13, 2004 at page 3 makes several queries regarding the purposes, whys, and hows of the claimed power socket embodiments. During the interview, held on Feb. 7, 2005, the Examiner explained that these were preliminary questions and not formal objections and rejections.

Drawings Objections

The drawings remain objected to under 37 CFR § 1.83(a). The Office Action mailed April 13, 2004 states that “claim 17 embedded capacitor with power and ground plates must be shown” (Office Action of April 13, 2004 at page 3). During the interview, held on Feb. 7, 2005, the Examiner and Applicant’s counsel agreed to prepare a new figure, FIG. 7, which is fully supported in the text on page 9, and which is a combination of existing FIGs. 3 and 5. Withdrawal of the drawing objection is respectfully requested.

FIGs. 2A and 5 were objected to, without citation to Statute or Rule. The informal objection asserted that “connections to proper terminals should be schematically shown.” (Office Action at page 3). Applicant discussed this Objection with the Examiner and reiterated that a socket is being claimed, which does not require the illustration of connections. The claims are drawn to power socket embodiments. The scope of what is claimed does not require claiming connections. Withdrawal of the objection is respectfully requested.

The drawings were objected to under 37 CFR § 1.83(a). The Office Action states that “claim 17 embedded capacitor with power and ground plates must be shown” (Office Action at page 3). Applicant respectfully traverses this objection and requests the Office to consider the following.

The Detailed Description section sets forth, in correlated X-Y-Z coordinates, the insertion of detailed capacitor embodiments, with their illustrations, and with detailed power socket

embodiments, similarly with their illustrations. Applicant considers the text and figures to adequately illustrate embedded capacitors in power socket embodiments. Following is a quotation from the Detailed Description section:

By this embodiment, current is also allowed to pass through a capacitor structure as illustrated generically by item 536. The capacitor structure 536 is disposed between the first power terminal 514 and the second power terminal 530. The capacitor structure 536 is oriented such that its capacitative surfaces (*e.g.* capacitor plates) are arranged orthogonal to the X-Y plane. In other words, the capacitor plates are vertically oriented to the major planar surface. *In one embodiment, the capacitor structure 536 includes an inter-digital capacitor (illustrated in various embodiments in Figures 3 and 4).* The inter-digital capacitor includes capacitor plates that are vertically (orthogonally) oriented to the major planar surface that is defined by the X-Y plane. Optionally and additionally, a second inter-digital capacitor 538 is disposed between the first ground terminal 516 and the second ground terminal 532 at the lower edge 540 of power socket 110. *It is noted in Figure 5 that the IDCs 310 or 410 may be used as an embodiment in the location of capacitors 536 and 538.*

(Applicant's specification, emphases added). requested. During the interview, Applicant's counsel asserted the description, set forth above, sufficiently enables what is claimed in combination. But to facilitate prosecution of the application, Applicant has provided a new FIG. 7, which is fully supported in the disclosure. Withdrawal of the objections is respectfully

§112 Rejection of the Claims

Claims 2, 3 and 5-25 were rejected under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement. During the Interview, Applicant's counsel respectfully asserted that connections are not claimed and therefore need not be illustrated. The Examiner had no answer for this assertion, but did not withdraw the rejections. Applicant therefore respectfully traverses this rejection and requests the Office to consider the following.

The claims are drawn to power socket embodiments. Connections are not claimed. Applicant respectfully asserts that one of ordinary skill in the art could connect the capacitors to the terminals without undue experimentation. Withdrawal of the rejections is respectfully requested.

§103 Rejection of the Claims

Claims 1 and 4-11 were rejected under 35 USC § 103(a) as being unpatentable over Arisaka (U.S. 5,538,433) alone or taken in view of Sato et al. (U.S. 6,201,298), Lockhart, Jr. (U.S. 3,880,493), Tanizawa (U.S. 5,475,261), Biswas (U.S. 4,519,658), Daftari et al. (U.S. 5,779,502) and Andric et al. (U.S. 6,551,114). Applicant respectfully traverses the rejection and requests the Office to consider the following.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (M.P.E.P. § 2143 8th Ed, Rev.1).

Claim 1 as amended includes the limitations of a rectangular power terminal, defined by a power terminal height by a power terminal width. Support for this amendment comes from page 5 of the Detailed Descriptions and elsewhere throughout the specification. No cited reference includes this limitation in connection with the other elements of claim 1. Arisaka, Biswas, and Daftari all teach circular terminals. Sato teaches a square power terminal, but the area thereof is the same, not greater than, that of the I/O pins. Tanizawa may teach a rectangular power terminal, but Tanizawa does not teach such in connection with a pin socket that has an area smaller than the power terminal, as required by claim 1. Because all the claims limitations have not been taught by the cited references, withdrawal of the rejections is respectfully requested.

Claims 1, 4 and 9 were also rejected under 35 USC § 103(a) as being unpatentable over Arisaka in view of Andric (U.S. 6,392,145). Applicant respectfully traverses the rejection and requests the Office to consider the following. Arisaka teaches circular terminals and pins integral to the platform, not I/O pin sockets. Andric may teach a rectangular power terminal, but Andric does not teach such in connection with an I/O pin socket that has an area smaller than the power terminal, as required by claim 1. Arisaka combined with Andric represents a mosaic of

disjoint references that can be combined only by using Applicant's disclosure as a guide.

Because all the claims limitations have not been taught by the cited references, withdrawal of the rejections is respectfully requested.

Claims 12-16 were also rejected under 35 USC § 103(a) as being unpatentable over Freehauf (U.S. 4,072,380) in view of Lockhart, Tanizawa, Lin et al. (U.S. 6,056,558), Arisaka, Baudouin et al. (U.S. 5,387,814), and Briones (U.S. 4,500,159). Applicant respectfully traverses the rejection and requests the Office to consider the following.

Freehauf Lin and Briones, as does Lockhart (discussed above), teach all terminals and sockets having substantially the same cross-sectional area. The combination of Freehauf with any of Lin, Briones, and Lockhart can only be achieved, therefore by using Applicant's disclosure as a guide. Freehauf combined with Tanizawa amounts to a structure that describe the claimed subject matter, because Tanizawa teaches pins for both power/ground and for I/O. Arisaka combined with Freehauf amounts to a structure that cannot be achieved, because Arisaka teaches circular power pins (current source pins 3, Arisaka). Because all the claims limitations have not been taught by the cited references, withdrawal of the rejections is respectfully requested.

Claims 17-25 were also rejected under 35 USC § 103(a) as being unpatentable over Freehauf in view of Lockhart, Briones and Baudouin et al. Applicant respectfully traverses the rejection and requests the Office to consider the following.

Applicant respectfully disagrees that the term "embedded" in claim 17 is not distinguishable over the teaching in Freehauf. The capacitor 20 in Freehauf is on an edge of the socket 10 and represents a rectangular footprint (top view) in a semicircular hole (relief area R). This arrangement is virtually equivalent to a square peg in a round hole, and the capacitor is anchored only by virtue of the structure 13, not by virtue of its *sui generis* structure. This capacitor 20 structure cannot be construed to encompass the claim language of "capacitor embedded in the socket platform." Baudouin may teach a capacitor, but Baudouin teaches a plastic packaged IC memory device (Baudouin at col. 3. line 9). The addition of Baudouin to the other references represents a mosaic of disjoint references which, even if Baudouin were to be a power socket as claimed, could only be coordinated by using Applicant's disclosure as a guide.

Because all the claims limitations have not been taught by the cited references, withdrawal of the rejections is respectfully requested.

Claims 4-8 were also rejected under 35 USC § 103(a) as being unpatentable over Freehauf in view of Arisaka, Andric, Baudouin et al. and Tanizawa. Applicant respectfully traverses the rejection and requests the Office to consider the following.

The deficiencies of each of the above-cited reference have been discussed above. Freehauf teaches all terminals and sockets having substantially the same cross-sectional area. Andric and Tanizawa may teach rectangular power terminals, but Andric and Tanizawa invariably teach pins, and they invariably do not teach the power terminals in connection with a pin socket that has an area smaller than the power terminal. Baudouin may teach a capacitor, but Baudouin teaches a plastic packaged IC memory device (Baudouin at col. 3. line 9). The addition of Baudouin to the other references represents a mosaic of disjoint references which, even if Baudouin were to be a power socket as claimed, could only be coordinated by using Applicant's disclosure as a guide. Because all the claims limitations have not been taught by the cited references, withdrawal of the rejections is respectfully requested.

Claims 2 and 3 were also rejected under 35 USC § 103(a) as being unpatentable over Freehauf in view of Arisaka and Tanizawa. Applicant respectfully traverses the rejection and requests the Office to consider the following.

The deficiencies of Freehauf, Arisaka, and Tanizawa alone, or in combination as set forth above, are incorporated herein by reference. Freehauf teaches all terminals and sockets having substantially the same cross-sectional area. Tanizawa may teach rectangular power terminals, but Tanizawa invariably teaches pins, and Tanizawa invariably does not teach the power terminals in connection with a pin socket that has an area smaller than the power terminal. Arisaka teaches all circular terminals. Applicant respectfully contends that the cited reference amount to a disjoint mosaic that cannot be assembled without using Applicant's disclosure as a guide. Because all the claims limitations have not been taught by the cited references, withdrawal of the rejections is respectfully requested.

Claims 17-22 were also rejected under 35 USC § 103(a) as being unpatentable over Lockhart in view of Johnson et al (U.S. 6,441,419) and Bajorek et al. (U.S. 4,328,530).

Applicant respectfully traverses the rejection and requests the Office to consider the following.

The deficiencies of Lockhart and Johnson are set forth above. Bajorek (as does Lockhart and Johnson, discussed above), invariably teaches all power/ground and signal sockets are item 17 and are same size. There is no teaching in this mosaic of references, therefore that teaches all the claim limitations in claim 17, let alone claims 18-22. Because all the claims limitations have not been taught by the cited references, withdrawal of the rejections is respectfully requested.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney John Greaves at (801) 278-9171, or Applicant's below-named representative to facilitate prosecution of this application.

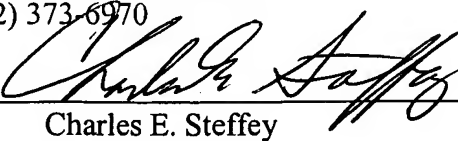
If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,
DONG ZHONG ET AL.
By their Representatives,
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
Attorneys for Intel Corporation
P.O. Box 2938
Minneapolis, Minnesota 55402
(612) 373-6970

Date

February 22, 2005

By



Charles E. Steffey
Reg. No. 25,179

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 22 day of February 2005.

Chris Hammond

Name

Chris Hammond

Signature

AMENDMENT UNDER 37 C.F.R. 1.116 – EXPEDITED PROCEDURE

Serial Number: 10/032,377

Filing Date: December 21, 2001

Title: EXTREMELY LOW INDUCTANCE HIGH POWER SOCKET USING EMBEDDED IDC CAPACITORS

Assignee: Intel Corporation

Page 2

Dkt: 884.712US1 (INTEL)

IN THE DRAWINGS

A new drawing, FIG. 7, is supplied herewith.